

AMENDMENTS TO THE CLAIMS

1. (currently amended) Articles prepared by extrusion, moulding and combinations thereof, comprising a heterophasic polyolefin composition comprising (percent by weight):

(1) 65-95% of a crystalline ~~propylene polymer selected from propylene homopolymer and random co- and terpolymers of propylene with 0.1-10% of an α -olefin selected from ethylene, a C₄-C₁₀ α -olefin and a mixture thereof~~, said crystalline propylene ~~polymer~~homopolymer being insoluble in xylene at ambient temperature in an amount over 85% and having a polydispersity index ranging from 4 to 13 and an intrinsic viscosity ($[\eta]$) value of over 2.2 dl/g; and

(2) 5-35% of an elastomeric olefin polymer of ethylene with a C₃-C₁₀ α -olefin and optionally a diene, having an ethylene content ranging from 15 to 85% and an intrinsic viscosity ($[\eta]$) value of at least 1.4 g/ml;

wherein a ratio of the intrinsic viscosity value of the crystalline propylene ~~polymer~~homopolymer (1) to that of elastomeric olefin polymer (2) ranges from 0.45 to 1.6.

2. (currently amended) The articles of claim 1 wherein the crystalline propylene ~~polymer~~homopolymer has a polydispersity index from 4.5 to 12.

3. (previously presented) The articles of claim 1 having a modulus of elasticity in tension higher than 2000 MPa.

4. (currently amended) Mono- or multi-layer pipes wherein at least one layer comprises a composition comprising:

(1) 65-95% of a crystalline ~~propylene polymer selected from propylene homopolymer and random co- and terpolymers of propylene with 0.1-10% of an α -olefin selected from ethylene, a C₄-C₁₀ α -olefin and a mixture thereof~~, said crystalline propylene ~~polymer~~homopolymer being insoluble in xylene at ambient temperature in an amount over 85% and having a polydispersity index ranging from 4 to 13 and an intrinsic viscosity ($[\eta]$) value of over 2.2 dl/g; and

(2) 5-35% of an elastomeric olefin polymer of ethylene with a C₃-C₁₀ α -olefin and optionally a diene, having an ethylene content ranging from 15 to 85% and an intrinsic viscosity ($[\eta]$) value of at least 1.4 g/ml;

wherein a ratio of an intrinsic viscosity value of the crystalline propylene

polymerhomopolymer (1) to that of elastomeric olefin polymer (2) ranges from 0.45 to 1.6.

5. (previously presented) The mono- or multi-layer pipes according to claim 4, wherein the pipes are solid wall pipes with a pipe wall thickness and smooth inner and outer surfaces, with an external diameter of ≥ 20 mm to ≤ 2000 mm, and have values of ring stiffness (SN) satisfying the following mathematical relationship

$$270 \text{ kN/m}^2 \times [10/(\text{SDR}-1)]^3 \geq \text{SN} \geq 130 \text{ kN/m}^2 \times [10/(\text{SDR}-1)]^3,$$

where SDR represents a ratio of the external diameter to the pipe wall thickness.

6. (previously presented) The mono- or multi-layer pipes according to claim 4, in which the pipe is a waste water pipe, a underground drain pipe or a buried sewage pipe.
7. (currently amended) A heterophasic polyolefin composition having a melt flow rate value up to 2 g/10 min and comprising (percent by weight):

(1) 65-95% of a crystalline ~~propylene polymer selected from~~ propylene homopolymer and random co- and terpolymers of propylene with 0.1-10% of an α -olefin selected from ethylene, a C_4 - C_{10} α -olefin and a mixture thereof, said crystalline propylene polymerhomopolymer being insoluble in xylene at ambient temperature in a percentage over 85% and having a polydispersity index ranging from 4 to 13 and an intrinsic viscosity ($[\eta]$) value of over 2.2 dl/g; and

(2) 5-35% of an elastomeric olefin polymer of ethylene with a C_3 - C_{10} α -olefin and optionally a diene, having an ethylene content ranging from 15 to 85%, and having an intrinsic viscosity ($[\eta]$) value of at least 1.4 g/ml;

wherein a ratio of the intrinsic viscosity value of crystalline propylene polymerhomopolymer (1) to that of elastomeric olefin polymer (2) ranges from 0.45 to 1.6.

8. (currently amended) The composition of claim 7 wherein the crystalline propylene polymerhomopolymer has a polydispersity index from 4.5 to 12.
9. (currently amended) A process comprising: extruding, moulding, or extruding and molding a composition comprising:

(1) 65-95% of a crystalline ~~propylene polymer selected from~~ propylene homopolymer and random co- and terpolymers of propylene with 0.1-10% of an α -olefin selected from ethylene, a C_4 - C_{10} α -olefin and a mixture thereof, said crystalline propylene polymerhomopolymer being insoluble in xylene at ambient temperature in an amount over 85% and having a polydispersity index ranging from 4 to 13 and an intrinsic viscosity ($[\eta]$)

value of over 2.2 dl/g; and

(2) 5-35% of an elastomeric olefin polymer of ethylene with a C₃-C₁₀ α -olefin and optionally a diene, having an ethylene content ranging from 15 to 85% and an intrinsic viscosity ($[\eta]$) value of at least 1.4 g/ml;

wherein a ratio of the intrinsic viscosity value of the crystalline propylene ~~polymer~~homopolymer (1) to that of elastomeric olefin polymer (2) ranges from 0.45 to 1.6.

10. (currently amended) Extruded profiles, films and sheets made from compositions comprising:

(1) 65-95% of a crystalline ~~propylene polymer selected from propylene homopolymer and random co- and terpolymers of propylene with 0.1-10% of an α -olefin selected from ethylene, a C₄-C₁₀ α -olefin and a mixture thereof~~, said crystalline propylene ~~polymer~~homopolymer being insoluble in xylene at ambient temperature in an amount over 85% and having a polydispersity index ranging from 4 to 13 and an intrinsic viscosity ($[\eta]$) value of over 2.2 dl/g; and

(2) 5-35% of an elastomeric olefin polymer of ethylene with a C₃-C₁₀ α -olefin and optionally a diene, having an ethylene content ranging from 15 to 85% and an intrinsic viscosity ($[\eta]$) value of at least 1.4 g/ml;

wherein a ratio of the intrinsic viscosity value of the crystalline propylene ~~polymer~~homopolymer (1) to that of elastomeric olefin polymer (2) ranges from 0.45 to 1.6.